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ABSTRACT

Research on the concept of teacher efficacy spans over 20 years, but much remains to be learned. Although precise definitions of the concept have always been problematic, in general, teacher efficacy is defined as teacher's belief or conviction that they can influence how well students learn (T. Guskey and P. Passaro, 1994). Efforts to clarify the definition of teacher efficacy are sometimes clouded by similar or related constructs. It is suggested that the only major difference between perceptions of efficacy and responsibility is in the tense of the items used in the measure, with efficacy representing projected potency and responsibility being an attribute directed toward the past. From the earliest research, teacher efficacy has been considered to have two dimensions, sometimes suggested to be outcome expectations and efficacy expectations. Others have interpreted the dimensions as personal efficacy and teaching efficacy. Guskey and Passaro (1994) have found the two dimensions to be: internal, the extent that teachers believe that they, and other teachers, have the influence and impact on student learning; and external, a dimension that measures teachers' perceptions of the influence and control of factors outside the classroom. This distinction is not the same as locus of control, because these two factors operate fairly independently. Researchers have identified other factors that may be equally powerful and important, and these remain to be studied in detail. (Contains 16 references.) (SLD)

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# Teacher Efficacy Measurement and Change

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## Teacher Efficacy Measurement and Change

Our research on the concept of teacher efficacy now spans over 20 years. Nevertheless, as I reflect on that expansive body of research evidence, I am reminded of R. Buckminister Fuller's famous quote: "The more we learn, the more we realize how little we know."

Precise definitions of teacher efficacy have always been problematic. Most of our modern definitions can be traced to the early psychological research of Heider (1958) or White (1959). Woolfolk and Hoy (1990) note that the earliest reference to "teacher efficacy" in the Educational Resources Information Center (ERIC) system is a study by Barfield and Burlingame (1974), in which efficacy is defined as "a personality trait that enables one to deal effectively with the world" (p. 10)

Rand researchers defined efficacy as "the extent to which the teacher believes he or she has the capacity to affect student performance" (McLaughlin & Marsh, 1978, p. 84). Aston (1985) defined it as "teachers' belief in their ability to have a positive effect on student learning" (p. 142). In general, teacher efficacy is perceived as "teachers' belief or conviction that they can influence who well students learn, even those who may be considered difficult or unmotivated" (Guskey & Passaro, 1994, p. 628).

Efforts to clarify our definition of teacher efficacy are sometimes clouded by other similar or related constructs. In particular, distinctions are sometimes drawn between teacher efficacy and teachers' perceptions of personal responsibility for student learning. I believe the only major difference between perceptions of efficacy and responsibility, however, is in the tense of the items used in the measure. Efficacy typically refers to projected potency in a particular situation. It is an expectation that is generally present or future directed. It is a teacher's belief that "I *can make* this happen." Responsibility, on the other hand, is an attribution reference that is reflective and directed toward the past. It is a teacher's belief that "I *made* this happen." Whether this difference in tense is truly important or simply a matter of semantics has yet to be determined.

Besides these definition problems, teacher efficacy is a psychometrician's nightmare. It is a conceptually appealing variable that is predictive of or highly related to a multitude of other critically important variables. Examples include student achievement and motivation, teachers' adoption of innovations, teachers' classroom management strategies, teachers' referrals for special education, supervisors' ratings of teachers' competence, program implementation success, and school effectiveness.

At the same time, it is a variable fraught with measurement dilemmas. From the very beginning there have been psychometric problems, especially related to reliability. Some of the best known studies involving teacher efficacy measured the variable with as few as two items. There also have been numerous interpretation problems related to validity and the true meaning of our measures.

Beginning with the earliest studies, teacher efficacy has been interpreted to have two dimensions (Berman & McLaughlin, 1977). Why two dimensions? I believe there are three possible explanations:

1. Sarcastic Explanation: We started with two items that seemed conceptually similar although their intercorrelation was relatively low. Therefore, they must be measuring different dimensions of the same construct.

2. Psychometric Explanation: Factor analyses of scales purporting to measure teacher efficacy that included more than two items were pretty well described by a two-factor model, even though those two factors never explained more than about a third of the variation in the measures.

3. Thoughtful Explanation: The nature of the items we included in scales designed to measure teacher efficacy limited assessment to only two dimensions.

An equally important question, however, is, Just what are those dimensions? In other words, what meaning do we attach to these dimensions? Seeking a theoretical explanation, Ashton and Webb (1982) turned to Bandura's (1977, 1978) social cognitive theory, in which he distinguished between "outcome expectations" and "efficacy expectations."

They believed that outcome expectations reflected perceptions of the consequences of teaching in general. They labeled this dimension "teaching efficacy," and believed it was the dimension tapped by the first Rand item, "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on home environment."

Efficacy expectations, on the other hand, reflected teachers' perceptions of their personal ability to bring about desired results. This dimension they labeled "personal efficacy," and believed it was assessed in the second Rand item, "If I try really hard, I can get through to even the most difficult and unmotivated students."

Shortly thereafter, Gibson and Dembo (1984) developed a 30-item scale to measure teacher efficacy. Through factor analysis they confirmed a two factor model and interpreted these factors as personal efficacy and teaching efficacy. Woolfolk and Hoy (1990) followed this work using 16 items from the Gibson and Dembo scale, plus the two Rand items and four new items. They, too, confirmed the two factor model and reinforced Gibson and Dembo's interpretation of the factors. However, Woolfolk and Hoy also noted inconsistencies between this factor interpretation and Bandura's theory, particularly in what is considered an "outcome" expectation versus an "efficacy" expectation.

Guskey and Passaro (1994) noticed an anomaly in the items included in the two scales of these instruments and offered an alternative explanation. Specifically, the items measuring personal efficacy used the referent "I" *and* were positive (i.e., "I can"). The items measuring teaching efficacy used the referent "teachers" *and* were negative (i.e., "teachers cannot"). To test what truly distinguishes these factors, we altered the wording to balance these item characteristics, administered this adapted scale to a sample of 342 teachers, analyzed the results, and found the personal versus teaching efficacy interpretations did not hold. Instead the difference was more an internal versus external distinction. The internal dimension measures the extent teachers believe that they as well as other teachers can or do have personal influence, power, and impact on students' learning. The external dimension measures teachers' perceptions of the influence, power, and impact of factors outside the classroom and beyond teachers' immediate or direct control.

I hasten to add, however, that this internal/external distinction is not the same as that of "locus of control" measures as conceived by Rotter (1966), although some researchers have foolishly interpreted it as such. If this were the case, these factors would represent opposite poles of a bipolar scale. Instead, these two factors (and teachers' perceptions of them) are distinct and operate fairly independently.

Despite the significant progress made in the measurement of teacher efficacy, I am not convinced we have yet captured the essence of teacher efficacy with these two dimensions. Preliminary evidence points to other factors that may be equally powerful and important. For example:

1. Stein and Wang (1988) point out that efficacy can be conceptualized and measured either globally or specifically, but most current measures are goal specific.
2. Specific measures of teacher efficacy often are narrowly conceived. Items assessing the influence of external factors in all current scales, for example, are all negative (e.g., lack of encouragement, insufficient home support, etc.). None tap perceptions of positive external factors (a positive home environment, supportive parents, etc.).
3. Guskey (1982) and Woolfolk and Hoy (1990) note the distinction teachers make when the reference is made to positive student outcomes versus negative outcomes.
4. Other evidence suggests teachers' judgments about students' abilities are an important mediating variable in measures of teacher efficacy.
5. Still other evidence (Guskey, 1987) indicates that whether an item designed to measure teacher efficacy refers to a single student or to a group of students can lead to different responses.
6. Perhaps most important, the potentially powerful influence of organizational variables (support, resources, peer relations and collaboration, etc.) has yet to be systematically investigated.

In conclusion, I believe we have learned a great deal in our efforts to accurately and reliably measure the construct we label "teacher efficacy," but we still have much to learn. Lessons from the past have taught us that we must be more careful, more thoughtful, and more sophisticated in our measurement efforts, and most especially in our interpretations of those measures.

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